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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/446,839	03/24/2001	Ernst Michael Winter	45/276 LI/SCH	2969

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EXAMINER

HO, THOMAS Y

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 07/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/446,839

Applicant(s)

WINTER ET AL.

Examiner

Thomas Y Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 14-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. A title similar to --Multi-layer Gemstone-- or the like is suggested.

Claim Objections

Claim 22 is objected to because of the following informalities:

Applicant recites the phrase "...which has a the visible surface (1) is one or more surfaces..." Correct grammar dictates that the phrase be changed to --...which has as the visible surface (1) one or more...--

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-17, 22-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Reber (U.S. Pat. No.4725511).

As to claim 14, Reber discloses an ornamental stone comprising:

- At least one visible surface (top edge of 10) adapted to serve as a support for a structured material layer (14).

As to claim 15, Reber discloses an ornamental stone wherein:

- The visible surface (top edge of 10) is smooth. It can be seen in Fig.1 that the visible surface (top edge of 10) is a straight line, denoting smoothness, and can be compared with the surface of another layer (top edge of 28) which is indicated as rough with an uneven line.

As to claim 16, Reber discloses an ornamental stone wherein:

- The material layer (14) is shiny. The material layer disclosed by Reber is composed of gold, aluminum, silver, etc. which are commonly known to be shiny and to reflect light (Col.3, Ln.26-39).

As to claim 17, Reber discloses an ornamental stone wherein:

- The material layer (14) comprises a precious metal or titanium nitride. The material layer disclosed by Reber is composed of gold, aluminum, silver, etc. or any other precious metal (Col.3, Ln.26-39).

As to claim 22, Reber discloses an ornamental stone which has:

- As the visible surface (top edge of 10) one or more surfaces that are level, concave, convex, or a mixture thereof.

As to claim 23, Reber discloses an ornamental stone wherein:

- A transparent protective layer (28) is disposed on the material layer (14) (Col.6, Ln.1-19).

As to claim 25, Reber discloses an ornamental stone which has:

- A body adapted to form a face of a clock (Col.7, Ln.46-53).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reber (U.S. Pat. No.4725511) in view of Lach (U.S. Pat. No.5423714).

As to claim 18, Reber fails to disclose or suggest the following limitations:

- A metallic layer as a retention intermediary is disposed between the visible surface and the material layer.

Lach discloses to use a thin coating of chromium-nickel or other suitable metal to help bond a metal coating on a substrate to ensure proper bonding occurs (Col.2, Ln.30-37). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the layers disclosed by Reber to include a metallic intermediary layer taught by Lach to ensure proper bonding of the material layer onto the substrate.

As to claim 19, Reber fails to disclose or suggest the following limitations:

- The retention intermediary is a titanium or chromium layer.

Lach discloses the use of an intermediary layer consisting of chromium-nickel (used as an example) as an adhesive coating followed by a coating of a precious metal (Col.2, Ln.30-37).

It would have been obvious to one of ordinary skill in the art to modify the layers disclosed by Reber to include a metallic intermediary layer of chromium to ensure proper bonding of the material layer onto the substrate.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reber (U.S. Pat. No.4725511) in view of Nassau et al. (U.S. Pat. No.5882786).

As to claim 20, Reber fails to disclose or suggest the following limitations:

- A body in the form of a diamond layer made via a CVD process with said visible face as a support for the material layer.

Reber discloses an ornamental stone which has a silicon substrate. Nassau et al. discloses a gemstone that is formed of silicon carbide coated with a diamond coating via a CVD process (Col.2, Ln.2-18, Ln.55-63). Nassau et al. also discloses that a coating of diamond is used to produce a harder surface that resists damage (Col.3, Ln.59-63). It would have been obvious to modify the ornamental stone disclosed by Reber to have a diamond layer on top of the silicon substrate taught by Nassau et al. because the diamond coating makes the ornamental stone less susceptible to damage.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reber (U.S. Pat. No.4725511) in view of Lach (U.S. Pat. No.5423714).

As to claim 21, Reber fails to disclose or suggest the following limitations:

- A body in the form of a polycrystalline diamond aggregate with said visible face as a support for the material layer.

Lach discloses that a polycrystalline diamond mounted onto a suitable substrate (Col.2, Ln.1-8) can be coated with a material layer, intermediary layer, and coating. Furthermore, Lach

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also discloses the specific advantages of using a polycrystalline diamond for ornaments (Col. 1, Ln.8-17). It would have been obvious to modify the ornamental stone disclosed by Reber to have a polycrystalline diamond as the visible surface for support of a material layer as taught by Lach because polycrystalline diamond is more precious and has better optical properties.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reber (U.S. Pat. No.4725511) in view of Konig et al. (U.S. Pat. No.5587233).

As to claim 24, Reber fails to disclose or suggest the following limitations:

- The protective layer is a CVD layer and is made of corundum or diamond.

Reber discloses the use of a transparent protective coating (28) on a substrate. Konig et al. discloses a substrate body made of diamond coated through CVD with at least one aluminum oxide surface layer, with aluminum oxide being commonly called corundum, for wear resistance (Col.2, Ln.31-46). It would have been obvious to modify the protective coating disclosed by Reber to be made of corundum as taught by Konig et al. so the ornamental stone assembly is more resistant to wear and is better protected.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No.4490440 to Reber discloses jewelry having multiple layers on a substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y. Ho whose email address is thomas.ho@uspto.gov and

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telephone number is (703) 305-4556. The examiner can normally be reached on M-F 9:30AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached on (703) 306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-3366.

TYH

June 20, 2002



ROBERT J. SANDY
PRIMARY EXAMINER

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